UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,730	10/19/2004	Kansei Iwata	253.44337X00	2574

20457 7590 04/12/2007

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER	
CHOW, JEFFREY J	
ART UNIT	**PAPER NUMBER**
2628	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/511,730	IWATA ET AL.	
	Examiner	Art Unit	
	Jeffrey J. Chow	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 20 February 2007 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1 – 9 and 15 have been considered but are moot in view of the new ground(s) of rejection necessitated by applicant's amendment.

Objections to the drawings have been withdrawn due to applicant's amendments.

The 35 U.S.C. 101 rejections have been withdrawn due to applicant's amendments.

The 35 U.S.C. 112, second paragraph, rejections have been withdrawn due to applicant's amendments and arguments.

Claim Objections

Claim 5 is objected to because of the following informalities: claim 5 depends on claim 4. Examiner believes that claim 5 should be dependent on claim 1.

Claim 2 is objected to because of the following informalities: "meansas" should be "means as" in line 3.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Examiner will note that the Universe Transverse Mercator (UTM) projection is notoriously well known in the art. The UTM projection is based on the ideas of Carl Gauss (1777- 1855) called the Gauss projection (nte-serveur.univ-lyon1.fr). The UTM projection evolved from the Transverse Mercator projection, which was evolved from the Mercator projection. To explain the basic ideas of the UTM projection, looking at the figure from nte-serveur.univ-lyon1.fr, imagine a cylinder that encloses the world where the axis of the cylinder runs through the north and south pole of the world. Next, imagine a light source in the center of the world where the light that passes through the world gets mapped to the cylinder and then unfolding the cylinder (www.paddles.com). This creates a projection of the world on a flat paper. The UTM projection can also be accomplish by taking narrow strips of the spherical world and laying it out on paper (plantsci.sdstate.edu and Figure 9). These strip pieces have irregular quadrilaterals that are set at predetermined distances of usually 6 degrees apart (plantsci.sdstate.edu and Figure 9), which reads on the claimed basic map that is produced through UTM drawing method, into grid-like sectors at a predetermined distance. The strip can be viewed as a sector where the irregular quadrilaterals that are divided by 6 degrees of

separation are small sectors (plantsci.sdstate.edu and Figure 9), which read on the claimed basic map being divided into smaller sectors. Since the strips used by the UTM projection is like peeling strips from an orange and flattening it produce discontinuous sectors, which read on the claimed small sectors that are produced while interpolating discontinuous data being in short between each sectors and within each of the sectors. Ultimately, the ideal situation to draw a flat map would be using the earlier method provided by www.paddles.com. Unfortunately, it is impossible to shine a light in the middle of the earth and map it out to a cylinder in outer space. Data are generally obtained from an aerial position within a certain distance in altitude or from the ground measuring elevation. But to map the world onto a flat surface, a translation of data obtained from a spherical surface to a flat surface without discontinuity must be made. That is what the basic UTM method provides.

Claims 1 – 3, 5, 6, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (page 1, line 16 – page 3, line 11, page 15, line 16 – page 16, line 26, page 17, lines 8 – 11, page 19, line 29 – page 20, line 15) in view of Beckwith, Jr. et al. (US 5,140,532) and Mattingly (US 5,150,295) and Yura (JP 06-067605) and Christensen (US 5,333,248).

Regarding independent claim 1, applicant's admitted prior art discloses:

"First of all, explanation will be made briefly, on a UTM drawing method, for producing a topographic map, to be a basis thereof, when producing the digital topographic map.

"As is shown in Fig. 1, lines connecting between the North Pole and the South Pole, orthogonally crossing the equator, on the earth 1 forming a sphere, are longitude lines 2, and those are latitude lines 3, orthogonally crossing those longitude lines.

"When dividing the earth by an angle 6° defined between the longitude lines 2 neighboring to each other, for example, 60 pieces of lines can be drawn onto the earth 1 having

the angle of 360°, by one (1) round, and then the longitude can be defined by those longitude lines 2, in the order or sequence thereof.

"Also, the latitude can be defined, by assuming that the equator be 0°, while the North Pole and the South Pole 90°, respectively, and then dividing the angle defined there between into a predetermined angle.

"When projecting the sphere 1, which is divided by the longitude lines 2 and the latitude lines 3, onto a plane through the Gulls-Krugger drawing method, then it comes to be such, as shown in Fig. 2.

"Through projection of the sphere onto the plane, a sector, which is divided by the longitude lines 2 and the latitude lines 3, is brought into an irregular quadrilateral, being narrow in the width on the side of the North Pole or the South Pole, as is shown in Fig. 3; i.e., it is reduced about 0,999 on the upside, if assuming the bottom side thereof is one (1), for example.

"**The Japanese maps, which are issued by the Geographical Survey Institute of Japan, they are produced through the UTM drawing method mentioned above**, and they are scaled down 1/50,000 or 1/25,000, mainly.

"On those maps, there are described the contour lines, produced upon the basis of a large amount of measured data, which are obtained the measurement or survey, together with the rivers, the elevations, the railways, the roads and also the names of places, etc., in the details thereof.

"Also, **in recent years**, the measured data obtained through the measurement is digitalized, and there is also supplied a digital map, which is divided by colors upon the basis of the height from a benchmark (i.e., the elevation level), as is shown in Fig. 7" (pages 15 and 16 and emphasis added).

Applicant's admitted prior art discloses:

"In case of obtaining a detailed map, such as, 50m or 25m, for example, shown in Fig. 3, from the map, **which is produced through the UTM drawing method mentioned above**, it is divided into sectors in a grid-like manner, at a distance 10m, etc., for example" (page 17 and emphasis added).

Applicant's admitted prior art discloses dividing the earth by an angle 6° defined between the longitude lines 2 neighboring to each other, 60 pieces of lines can be drawn onto the earth 1 having the angle of 360° and then the longitude can be defined by those longitude lines 2 (page 15 and Figure 2) and a detailed map, such as, 50m or 25m, is divided into sectors in a grid-like manner, at a distance 10m, etc. (page 17 and Figure 3), which reads on the claimed dividing a basic map produced through a UTM drawing method, into irregular grid-like sectors at a

predetermined distance. Applicant's admitted prior art did not expressly disclose further dividing each irregular grid-like sector obtained to thereby produce irregular small sectors. Beckwith, Jr. discloses a 100km square block further divided into 12.5km block further divided into 1.562km block (column 5, line 44 – column 2, line 55 and Figure 2). It would have been obvious for one of ordinary skill in the art the time of the invention to modify the applicant's admitted prior art system to divide irregular sectors into smaller sectors within the irregular sectors. One would be motivated to do so because this may allow independent data processing and effective compression of digital data for storage.

Applicant's admitted prior art discloses:

"The second topographic map 7 produced in such the manner as was mentioned above, since it is produced by blocking into the irregular quadrilateral having the upside smaller than the bottom side, then if gathering such the blocked second topographic maps 7 in plural numbers thereof, there occurs a problem such as, shifting on the contour lines 6 between the topographic maps neighboring to each other, etc.

"**For dissolving such the problem**, the coordinate conversion is made upon the coordinate address on the irregular quadrilateral into the coordinate addresses on the equilateral quadrate, which maintaining the data and the number within that sector, **through the known method, which is described in Japanese Patent Laying-Open No. 2000-118051 (2000), prior filed by the same applicant,** thereby producing a third (3^{rd}) topographic map 8 of equilateral quadrate, mathematically (step 5).

"Those processes are performed with using the map producing system, in the similar manner to that shown in the prior-application, however explaining the method briefly, herein, Fig. 14(a) shows the second topographic map 7 at an arbitrary place, having the shape of an irregular quadrilateral, which is cut out from the projection data through the Gulls-Krugger drawing method, and a third topographic map 8 of the right-angled equilateral quadrate of the coordinate conversion program designates a process of pattern conversion, from the coordinate of the irregular quadrilateral shown in Fig. 14(a) into the right-angled equilateral quadrate" (pages 19 and 20).

Applicant's admitted prior art did not expressly disclose interpolating discontinuous data between each irregular grid-like sector and between each of the irregular small sectors.

Mattingly discloses aligning edges of sections of maps by connecting lines on one edge of a map

with lines of one edge of another map (abstract, column 6, line 36 – column 7, line 30 and Figure 2). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify applicant's prior art system by connecting discontinuous sections of map. One would be motivated to do so because this would cause less error on the visual of the whole map. Applicant's admitted prior art did not expressly disclose connecting irregular small sectors with the same elevation with a straight line. Yura discloses a basic map of the earth that is produced through UTM, where the basic map of the earth is divided into grid-like sectors 502 where these grid-like sectors are divided into smaller segments as shown in reference character 505 (paragraphs 28 – 30 and Figure 5). Yura discloses connections of points with the same altitude or the same height above the elevation level, just like contour lines on topography maps are connected by points that have the same altitude or the same height above the elevation level (Figure 1). Yura discloses information is taken in by x, and (y, h) as the position coordinate where h is the height at the x and y coordinates (paragraph 8). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify applicant's admitted prior art's system by relating height data to x, y coordinates and connecting data points with the same height with a line. One would be motivated to do so because this provides contour map where uses can easily read elevation height and have a general understand what a desired land would look like in terms of elevation, longitude, and latitude. Applicant's admitted prior art did not expressly disclose a smoothing process of the obtained data points, but Yura does disclose a smooth topographical map (Figure 1). Christensen discloses a smooth process of topographical map by smoothing data forming a triangle into curve contour lines (Abstract). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify applicant's

admitted prior art system with Christensen's teachings of smoothing linear segments within a triangular mesh to produce a smooth topographic map. One would be motivated to do so because this would give a topographical map a more realistic visual presentation instead of a blocky digital visual presentation. Applicant's admitted prior art discloses the coordinate conversion is made upon the coordinate address on the irregular quadrilateral into the coordinate addresses on the equilateral quadrate, which maintaining the data and the number within that sector, through the known method, which is described in Japanese Patent Laying-Open No. 2000-118051 (2000), prior filed by the same applicant, thereby producing a third (3^{rd}) topographic map 8 of equilateral quadrate, mathematically (step 5) (pages 19 and 20 and Figures 2 and 3), which reads on the claimed revising and interpolating each irregular quadrilateral produced from the basic map and the map elements through said UTM drawing method, to form a right-angled quadrilateral, thereby producing a third topographic map and the claimed displaying the third topographic map.

Regarding dependent claim 2, applicant's admitted prior art did not expressly disclose digital data is stored with map element data in a recording means, and those data are displayed on a display means as a single or multi-layer structure, or outputted on a paper as the topographic map. Yura discloses a topography map being displayed as a single layer and a layer structure that is 3-D (Figure 1). Yura discloses an auxiliary storage unit 404 that stores the program, which process the map data of various projections and main storage 402 may read the map data stored in the auxiliary storage unit 404 (paragraph 27 and Drawing 4). It is inherent that Yura's system x, and (y, h) coordinates are map element data. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify applicant's admitted prior art by

having a storage device that stores various map data and a display device the displays the various map data. One would be motivated to do so because having these functionalities on a computer is efficient and faster than human or non-computer devices.

Regarding multiple dependent claim 3, applicant admitted prior art did not expressly disclose a checking function is provided for checking on whether the mathematical process is conducted, appropriately or not, so that the lines of segments come cross with each other, when producing said first topographic map, by connecting said small sectors having the same elevation level, sequentially. Christensen discloses a checking of a user specified minimum angle where a triangle is flagged if the triangle is unsuitable for smoothing and where the flagged triangle avoids contours intersecting. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify applicant's admitted prior art by having a checking function to see a smoothing process is appropriate or not. One would be motivated to do so because this would help prevent errors to occur.

Regarding dependent claim 5, applicant's admitted prior art did not expressly disclose digital data is stored with map element data in a recording means, and those data are displayed on a display means as a single or multi-layer structure, or outputted on a paper as the topographic map. Yura discloses a topography map being displayed as a single layer and a layer structure that is 3-D (Figure 1). Yura discloses an auxiliary storage unit 404 that stores the program, which process the map data of various projections and main storage 402 may read the map data stored in the auxiliary storage unit 404 (paragraph 27 and Drawing 4). It is inherent that Yura's system x, and (y, h) coordinates are map element data. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify applicant's admitted prior art by

having a storage device that stores various map data and a display device the displays the various map data. One would be motivated to do so because having these functionalities on a computer is efficient and faster than human or non-computer devices.

Regarding independent claim 6, claim 6 is similar in scope as to claims 1, 2, and 5, thus the rejections for claims 1, 2, and 5 hereinabove is applicable to claim 6.

Regarding independent claim 15, claim 15 is similar in scope as to claims 1 and 4 – 6, thus the rejections for claims 1 and 4 – 6 hereinabove is applicable to claim 15. Yura discloses the information is stored as vector-like data where the information is represented by x, and (y, h) as the position coordinate where h is the height at the x and y coordinates (paragraph 8), which reads on the claimed vector data. Christensen discloses a smooth process of topographical map by smoothing data forming linear lines in a triangular mesh representation into curve contour lines (Abstract), which reads on the claimed mesh-like data. Christensen discloses non-intersecting line segments due to the connecting points with same elevation data (Figures 3B and 13), which reads on the claimed tolerance.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (page 1, line 16 – page 3, line 11, page 15, line 16 – page 16, line 26, page 17, lines 8 – 11, page 19, line 29 – page 20, line 15) in view of Yura (JP 06-067605) and Christensen (US 5,333,248) and Yanker (US 5,249,263)

Regarding dependent claim 7, applicant's admitted prior art did not expressly disclose the control of colors for coloring the topography map based on elevation levels. Yanker discloses tools that of a slide bar that controls the selected color by the user (Figure 4). Yanker also discloses an image editor that pull up a color palette display 12 that overlays the image 14 on the

screen and enables the image to be edited for color (column 3, lines 26 – 33). It would have been obvious for one of ordinary skill in the art to modify the combination of applicant's admitted prior art system with Yanker's teachings of color editing an image to have colors representing certain elevation levels on a topography map that is user customizable. One would be motivated to do so because this would give users a better visualization of how high or low a certain place is by using color mapping to a certain altitude (for example the images from www.myfolsom.com and earth.leeds.ac.uk) instead of finding the numerical number on a topography map and tracing the line back to the desired spot in determining the altitude.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (page 1, line 16 – page 3, line 11, page 15, line 16 – page 16, line 26, page 17, lines 8 – 11, page 19, line 29 – page 20, line 15) in view of Yura (JP 06-067605) and Christensen (US 5,333,248) and Yanker (5,249,263) and Hale (5,961,573).

Regarding dependent claim 8, applicant's admitted prior art did not expressly disclose the control of colors for coloring the topography map based on elevation levels and having a color legend. Yanker discloses tools that of a slide bar that controls the selected color by the user (Figure 4). Yanker also discloses an image editor that pull up a color palette display 12 that overlays the image 14 on the screen and enables the image to be edited for color (column 3, lines 26 – 33). Hale discloses a color legend for certain height range (Figure 4). It would have been obvious for one of ordinary skill in the art to modify the combination of applicant's admitted prior art system with Yanker's teachings of color editing an image and Hale's teaching of representing height of a topography map with color and providing a legend to have colors

representing certain elevation levels on a topography map that is user customizable and having a legend that maps height to a certain color. One would be motivated to do so because this would give users a better visualization of how high or low a certain place is by using color mapping to a certain altitude and using a legend for a quick reference (for example the images from www.myfolsom.com and earth.leeds.ac.uk) instead of finding the numerical number on a topography map and tracing the line back to the desired spot in determining the altitude.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (page 1, line 16 – page 3, line 11, page 15, line 16 – page 16, line 26, page 17, lines 8 – 11, page 19, line 29 – page 20, line 15) in view of Yura (JP 06-067605) and Christensen (US 5,333,248) and Yanker (5,249,263) and Hale (5,961,573) and Koyanagi (5,884,217).

Regarding multiple claim 9 in any of its combination, applicant's admitted prior art did not expressly disclose a sub screen that displays the same content of the topography map that is displayed on the main screen based on at least one of a map number, a map name. Koyanagi discloses a sub-screen that displays the same information type as the main screen (Figure 6). Koyanagi also discloses sectors of the map being represented by numbers (Figure 11). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify the combination of applicant's admitted prior art system with Koyanagi's teachings of displaying maps and storing maps with any combination of Hale's teachings and Yanker's teachings to display a main screen and a sub screen of the same map type. One would be motivated to do so because this would give users a zoomed in portion of the desired area and a different "angle" of viewing the topography map, and to designate maps by numbers, which is one of the efficient

ways to name and store maps in a computer system for quick access and reference to the desired maps to be displayed and to be able to display the desired maps in a quick manner.

Claims 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (page 1, line 16 – page 3, line 11, page 15, line 16 – page 16, line 26, page 17, lines 8 – 11, page 19, line 29 – page 20, line 15) in view of Yura (JP 06-067605) and Christensen (US 5,333,248) and Arakawa et al. (JP 11-282344).

Regarding dependent claim 10, applicant's admitted prior art did not expressly disclose a cursor that display x, y coordinates. Arakawa discloses a cursor that displays a crosshair and the x, y, coordinates on the display. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify the combination of applicant's admitted prior art system by incorporating a pointer with a crosshair and display x, y coordinates. One would be motivated to do so because this would give users the relative position of a desired location.

Claims 11 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (page 1, line 16 – page 3, line 11, page 15, line 16 – page 16, line 26, page 17, lines 8 – 11, page 19, line 29 – page 20, line 15) in view of Yura (JP 06-067605) and Christensen (US 5,333,248) and Kobayashi et al. (JP 2001-140257).

Regarding dependent claim 11 – 13, applicant's admitted prior art did not expressly disclose cross-sectional view of the third topographic map cut by a straight line on any type of terrain. Kobayashi discloses cross sectional views of a third topographic cut by straight lines where the straight lines are defined by two points (paragraphs 60 – 64 and Figure 14). It would

have been obvious for one of ordinary skill in the art at the time of the invention to modify the combination of applicant's admitted prior art system by displaying a cross-sectional view of a topographic map through any two points from any geographical terrain. One would be motivated to do so because this would provide an easier view for users to examine 3-D data.

Claims 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (page 1, line 16 – page 3, line 11, page 15, line 16 – page 16, line 26, page 17, lines 8 – 11, page 19, line 29 – page 20, line 15) in view of Yura (JP 06-067605) and Christensen (US 5,333,248) and Surfer Software ("Surfer 8 – 3d contour maps and surface plots software").

Regarding dependent claim 14, applicant's admitted prior art did not expressly disclose showing arrows that indicate at least one of a direction or a magnitude of an inclination of land. Surfer Software discloses arrows that show magnitude and direction of the inclination of the land (pages 4 and 5). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify the combination of applicant's admitted prior art's system by using vector maps to display the magnitude and direction of the inclination of a land. One would be motivated to do so because this would enhance the presentation of the desired map at a desired location.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)-272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJC

ULKA J. CHAUHAN
PRIMARY EXAMINER